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ARIZONA STATE UNIVERSITY ■ COLLEGE OF BUSINESS
CENTER FOR BUSINESS RESEARCH

*Quarterly Economic Forecast Update*

# Arizona Economy To Remain Sluggish, Improve in 1990

Although the longest peacetime expansion of the U.S. economy should continue through 1989, the Economic Outlook Center (EOC) expects the Arizona economy to struggle in the months ahead. By 1990, if the nation can avoid sliding into a recession, Arizona should be well-positioned to enjoy stronger growth. However, if the nation's economy were to weaken perceptibly in 1989 and 1990, it is unlikely Arizona would rebound before 1991 or 1992.

The last fifteen months have been characterized by unprecedented levels of uncertainty. The October 1987 stock market crash threatened the stability of global financial markets in a manner not seen since the Great Depression and World War II. The economy bounced back from the crash remarkably well, but doubts persisted about the viability of the current expansion well into 1989.

The prospect of the Presidential election exacerbated the uncertainties until the outcome was no longer in doubt. By then, however, the growing plight of the ailing savings and loan industry, combined with a new surge of leveraged buy-outs and merger mania, only served to keep the financial markets skittish.

Through it all, the U.S. economy has performed admirably. Those who wondered if the recovery would stall last summer may have been surprised when the Bureau of Economic Analysis, U.S. Department of Commerce, reported the economy grew at an annual rate of 2.6 percent during third quarter 1988 and showed no signs of recession.

While much of the nation prospered in 1988, the Arizona economy struggled. Many real estate markets suffered from overbuilding, but Phoenix and Tucson have suffered more than most. Combined with a relatively stagnant manufacturing sector, the state's real estate slump has caused its economy to perform below the levels observed a few years ago. These factors also will limit Arizona's 1989 growth potential.

## THE NATIONAL ECONOMY

In a November speech in Flagstaff, Lester C. Thurow, professor of economics and dean of MIT's Sloan School of Management, described the nation's growth path as a tunnel. The U.S. economy, he argued, must continue to grow as it has in recent years: in a range defined by real GNP growth of 2.5 to 3.5 percent per year.

If the economy expands too rapidly, inflation and a falling dollar

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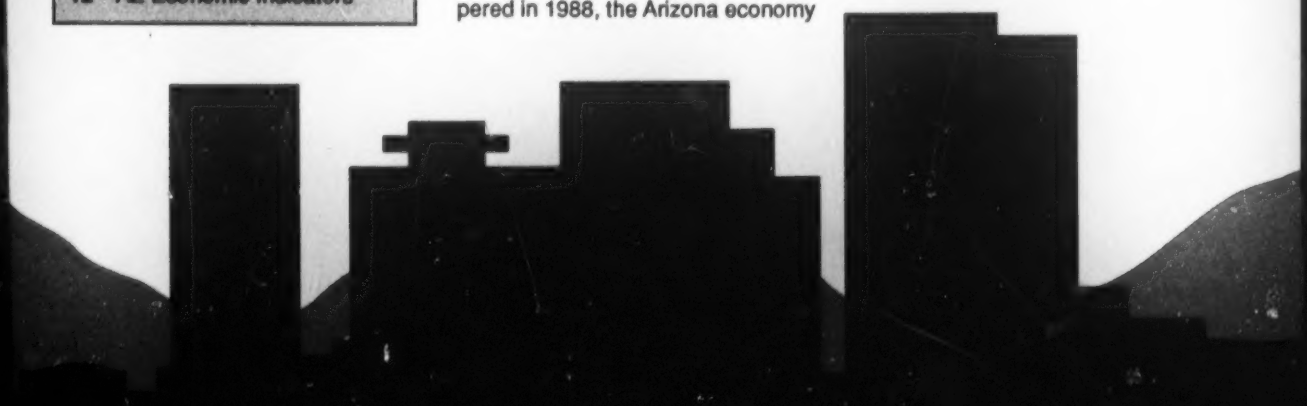

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could cause the foreign capital that has financed the budget and trade deficits to flee, resulting in soaring interest rates and recession. If growth is too slow, then U.S. imports from Latin America would decrease, many nations would be unable to make their interest payments to American banks, and a financial crisis could result.

Since 1985, U.S. policy makers have been successful in steering this narrow course. Although the dollar has lost about half its value versus the yen and the deutchmark, its decline has been gradual. And, while real economic growth has surged at times, spurring fears of inflation, either policy or serendipity has kept the nation's growth within sustainable limits.

A fortuitous combination of events has given the economic recovery unprecedented longevity. The severity of the 1981-1982 recession created a backlog of consumer demand which allowed the economy to roar ahead at better than 6 percent per year in 1984. By spring 1985, the dollar began its long decline and set the stage for the export-driven expansion of American manufacturing that followed. By late 1985, fears of rising inflation caused interest rates to climb, fueling doubts about the recovery's duration.

World oil markets collapsed in early 1986, which slew the inflation monster, at least for the time being. Long-term interest rates dropped to levels not seen since the 1970s, creating a new wave of demand for housing and consumer durables. Strong stock and bond prices gave U.S. corporations access to swelling streams of capital to finance business expansion or—in many cases—mergers and leveraged buyouts. Single-digit interest rates also allowed the tax-related boom in office, commercial and multifamily construction to continue unabated across much of the United States.

Meanwhile, depressed prices for oil and other commodities took their toll on personal income and business confidence in the resource-based economies of the oil, gas, mining and farming states. This resulted in what Jerry Jordan, chief economist at First Interstate Bancorp, called the "souffle economy" (firm on the edges, soft in the middle). The slump in the central states may have shaved enough of the peak off of the nation's aggregate demand to allow the economy to remain within Lester Thurow's growth tunnel.

By 1987, the national economy (with the notable exception of the aforementioned oil and farm states) was almost too good to be true. In a sense, it was. However complex or elusive the causes of the October 1987 crash may have been, one result was clear. It scared the financial markets back to reality and cooled the American consumer's ardor for unfettered spending.

As luck would have it, though, renewed strength in corporate profits and business investment spending came to the rescue. While consumer demand for imports climbed at a slower rate, manufacturers began to benefit from the weaker dollar in the form of rising exports and profits. By 1988, American firms were well-positioned to take advantage of enhanced competitiveness which resulted from the declining dollar and the cost reductions brought about by the mid-1980s wave of corporate restructuring. Renewed confidence and rising sales abroad led to additional investment in plant and equipment and allowed the economic expansion to continue.

How long can the nation's economy continue to walk along the knife-edge between a recession or an unsustainable boom? Nobody knows. However, barring unforeseen shocks, calamities or grave policy errors, there is no reason to believe that the expansion cannot continue for another year or two, if not longer. Of course, a major shock to the global economy—inherently unpredictable—could develop into a recession very quickly.

## THE U.S. OUTLOOK

The EOC's forecast for the U.S. economy is summarized in Table 1. The forecast embraces a somewhat more optimistic view of the outlook than it did three months ago (*Arizona Business*, October 1988). Overall, real economic growth in the United States is expected to average 2.5 percent in 1989 and 2.4 percent in 1990, somewhat less than the estimated growth rates of 3.4 and 3.8 percent, respectively, in 1987 and 1988. Consumer purchases of durable goods, which were growing at an annual rate exceeding 10 percent during the first half of 1988, slowed substantially during the third quarter; the subsequent reduction in aggregate demand is partially responsible for the moderation in economic growth anticipated next year and in 1990.

**TABLE 1**
**1988 AND 1989 ECONOMIC FORECASTS: UNITED STATES**

| | Actual *1987* | Estimated *1988* | Forecast *1989* | Forecast *1990* |
|---|---|---|---|---|
| Gross National Product | | | | |
| Billions of 1982 Dollars | 3,847.0 | 3,994.0 | 4,093.7 | 4,192.0 |
| Percent Change | 3.4 | 3.8 | 2.5 | 2.4 |
| Industrial Production | | | | |
| Percent Change | 3.8 | 5.4 | 3.1 | 2.8 |
| Net Exports | | | | |
| Billions of 1982 Dollars | –134.3 | –94.9 | –76.4 | –69.9 |
| Housing Starts | | | | |
| Number in Millions | 1.62 | 1.47 | 1.44 | 1.52 |
| Percent Change | –10.5 | –9.3 | –2.0 | 5.6 |
| Unemployment Rate | | | | |
| Percent | 6.2 | 5.5 | 5.5 | 5.8 |
| Consumer Price Index | | | | |
| Percent Change | 3.7 | 4.1 | 4.7 | 4.7 |
| Three-Month Treasury Bill Rate | | | | |
| Percent | 5.8 | 6.6 | 7.4 | 6.8 |
| Aaa Corporate Bond Rate | | | | |
| Percent | 9.4 | 9.8 | 10.1 | 9.8 |

*Source:* Economic Outlook Center, College of Business, Arizona State University.

Reduced demand for durable goods, in turn, is primarily responsible for the slower growth of industrial production expected in 1989 and 1990, when output is projected to increase respectively by 3.1 and 2.8 percent. While these increases would be well below the estimated 5.4 percent increase observed in 1988, it should be noted that at least some of the output gains in 1988 were attributable to the record-breaking heat wave last summer that caused the production of electricity to surge throughout much of the United States. In any event, softening demand, if not cooler weather, should yield smaller gains in industrial production during the next two years.

Interest rates are projected to continue a gradual climb in 1989 before falling back a little in 1990. The expected results include lower levels of business investment spending and fewer housing starts, which are expected to total 1.44 million units in 1989; in 1990, if long-term interest rates decline as projected, more than 1.5 million housing starts are forecast.

The rate of inflation is expected to increase but to remain below 5 percent per year for the duration of the forecast period (see Figure I). A key contingency is the price of crude oil, which firmed in the wake of the most recent round of OPEC meetings. If the OPEC nations are serious about enforcing their production quotas, higher crude oil prices could cause higher inflation (and interest rates) than these forecasts would suggest. The bet here, however, is that the cartel will produce enough oil to prevent fuel prices from rising very rapidly during 1989 and 1990. Otherwise, higher prices for gasoline, heating oil, chemicals and fibers could combine with rising labor costs and food prices to fuel a surge in the inflation rate, possibly to 6 percent per year or more.

World currency markets also present a major risk to the forecast. With a meager private savings rate, a huge federal budget deficit and an insatiable demand for imported goods, the United States is extraordinarily dependent on foreign capital flows to finance current consumption and government spending. If the exchange value of the dollar were to sink sufficiently to dissuade foreign investors from holding U.S. bonds and Treasury notes, a severe and sudden capital shortage could develop, with soaring interest rates (and recession) the probable result.

## THE ARIZONA FORECAST

The EOC's forecasts for Arizona and the Phoenix metropolitan area are summarized in Tables 2 and 3 (page 4). Economic growth in the state is expected to be unusually weak in 1989 for two reasons. First, the widely-reported construction slump that has dogged Arizona's developers, construction firms and financial institutions since 1986 will continue at least through 1990. If the national economy proves to be less robust than the forecasts in Table 1 would indicate, the real estate recovery will be delayed even longer. Until millions of square feet of office, retail and multifamily residential space are absorbed, there will be no reason to expect a significant rebound in construction activity.

The second limiting factor is the disappointing performance of Arizona's manufacturing sector. Many analysts have grown old waiting for the high-technology export boom that never arrived in Arizona. Regardless of the source of the failed expectations—cuts in defense spending, corporate mergers, or redeployment of company assets outside of Arizona—it is unlikely that a belated surge of hiring activity will develop. The EOC continues to believe manufacturing activity in Arizona will be relatively weak until 1990, and improvement then will occur only if the national economy keeps growing at a respectable pace.

### Employment

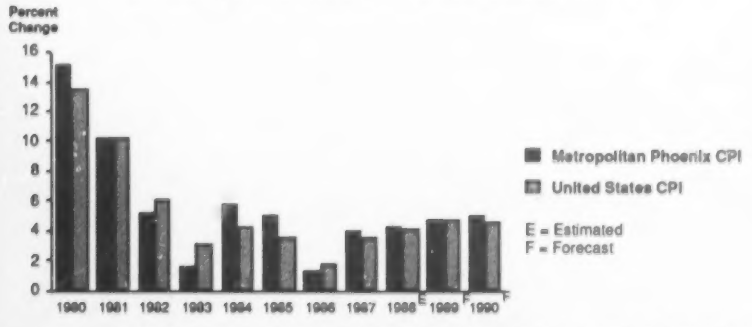
The EOC's Arizona employment forecasts are detailed in Table 4 (page 5). Falling employment in two major sectors—construction and manufacturing—will suppress employment growth to a rate of just 2.5 percent in 1989, the weakest labor market conditions observed in the state since 1982. By 1990, modest improvements by these industries, combined with expanded hiring in the service-providing industries, should yield a relatively healthy employment rate of 4.2 percent in 1990. The finance, insurance and real estate (FIRE) sector is expected to stabilize, but it will grow at less than half the rate observed as recently as 1986 and 1987.

### Personal Income

Weak job formation in construction, FIRE and manufacturing—relatively well-paying industries—is expected to yield smaller gains in Arizona personal income in 1989, when a gain of 6.6 percent is forecast. By 1990, however, improved hiring and rising wages should push the rate of income growth to 7.8 percent, comparable to the 8 percent gain recorded in 1987.

Lackluster labor markets have not only inhibited income growth, but consumer spending as well. Figure II (page 5) illustrates the relationship between personal income and retail sales growth since the recession year 1982. Pent-up demand for consumer durables fueled double-digit increases in retail sales during the early stages of the expansion. Rapid

**FIGURE I**
**CONSUMER PRICES**
**METROPOLITAN PHOENIX AND THE UNITED STATES**




*Source:* Center for Business Research and Economic Outlook Center, College of Business, Arizona State University; and Bureau of Labor Statistics, U.S. Department of Labor.

**TABLE 2**
**1988 AND 1989 ECONOMIC FORECASTS: ARIZONA**

| | Actual 1987 | Estimated 1988 | Forecast 1989 | Forecast 1990 |
|---|---|---|---|---|
| **Gross State Product** | | | | |
| Millions of 1982 Dollars | 47,020 | 47,975 | 49,128 | 50,991 |
| Percent Change | 2.2 | 2.0 | 2.4 | 3.8 |
| **Personal Income** | | | | |
| Millions of Current Dollars | 48,466 | 51,876 | 55,308 | 59,632 |
| Percent Change | 6.0 | 7.0 | 6.6 | 7.8 |
| **Retail Sales** | | | | |
| Millions of Current Dollars | 18,001 | 18,868 | 19,714 | 20,785 |
| Percent Change | 4.7 | 4.8 | 4.5 | 5.4 |
| **Unemployment Rate** | | | | |
| Percent | 6.3 | 6.3 | 6.8 | 6.5 |
| **Wage and Salary Employment** | | | | |
| Number in Thousands | 1,383.7 | 1,425.9 | 1,462.0 | 1,524.0 |
| Percent Change | 3.4 | 3.0 | 2.5 | 4.2 |
| **Population** | | | | |
| Number in Thousands | 3,405 | 3,476 | 3,552 | 3,638 |
| Percent Change | 3.1 | 2.1 | 2.2 | 2.4 |
| **Single-Family Units Permitted** | | | | |
| Number | 27,360 | 22,220 | 19,330 | 22,410 |
| Percent Change | –19.7 | –18.8 | –13.0 | 15.9 |
| **Multifamily Units Permitted[1]** | | | | |
| Number | 12,038 | 7,850 | 6,410 | 6,950 |
| Percent Change | –55.4 | –34.8 | –18.3 | 8.4 |

[1]Apartment complexes of three or more units

**TABLE 3**
**1988 AND 1989 ECONOMIC FORECASTS: MARICOPA COUNTY**

| | Actual 1987 | Estimated 1988 | Forecast 1989 | Forecast 1990 |
|---|---|---|---|---|
| **Consumer Price Index** | | | | |
| Percent Change | 4.1 | 4.3 | 4.8 | 5.1 |
| **Retail Sales** | | | | |
| Millions of Current Dollars | 11,743 | 12,264 | 12,819 | 13,527 |
| Percent Change | 3.5 | 4.4 | 4.5 | 5.5 |
| **Unemployment Rate** | | | | |
| Percent | 5.2 | 5.1 | 5.7 | 5.3 |
| **Wage and Salary Employment** | | | | |
| Number in Thousands | 912.7 | 938.1 | 962.6 | 1,005.7 |
| Percent Change | 3.4 | 2.8 | 2.6 | 4.5 |
| **Population** | | | | |
| Number in Thousands | 1,970 | 2,013 | 2,061 | 2,116 |
| Percent Change | 3.6 | 2.1 | 2.4 | 2.7 |
| **Single-Family Units Permitted** | | | | |
| Number | 18,012 | 14,740 | 12,560 | 14,570 |
| Percent Change | –24.5 | –18.2 | –14.8 | 16.0 |
| **Multifamily Units Permitted[1]** | | | | |
| Number | 9,106 | 5,980 | 4,720 | 5,220 |
| Percent Change | –50.3 | –34.5 | –20.8 | 10.6 |

[1]Apartment complexes of three or more units

*Source (Tables 2 and 3)*: Economic Outlook Center, College of Business, Arizona State University.

job creation through the mid-1980s helped keep sales strong, but consumer spending waned as employment diminished and jobs were lost in construction, finance and manufacturing. A sharp reduction in population growth (from more than 4 percent per year to barely more than 2 percent) also has contributed to the sluggish income and sales growth observed in 1988 and predicted for 1989.

### Construction

Of course, slower population growth also is a major reason why housing construction has fallen off in Arizona, especially in the Phoenix and Tucson metropolitan areas. Migration flows to Arizona diminished in response to the reduced rate of job growth that developed when the construction and manufacturing industries faltered in 1986.

Tax legislation passed during the early years of the Reagan administration made income-producing real estate an unusually attractive tax shelter for investors and developers throughout the country. At the same time, Arizona's explosive growth between 1983 and 1985 attracted more than its share of speculative dollars to the state's real estate market. So, while overbuilding certainly is not unique to Arizona, the state came to have more new construction than even the most effervescent regional economy could possibly absorb.

Figure III provides an interesting contrast between Arizona's last two major home building booms. In 1978, more than 50,000 single-family homes were permitted, a level that was not reached at the height of the mid-1980s boom, when the state was much bigger. However, changing consumer tastes alone did not raise the mid-1980s level of multifamily construction to more than double the 1978 level. The tax laws were responsible.

It is no surprise, then, that the tax reforms enacted in 1986, combined with reduced migration to Arizona, snuffed out speculative multifamily construction in a hurry. With apartment vacancy rates in metropolitan Phoenix well into the mid-teens, it seems reasonable to assume that, barring a huge influx of migrants to Arizona, multifamily home building will remain below 10,000 units per year for at least several more years.

## SUMMARY

Given the impressive record compiled by the Arizona economy in recent years, it is difficult not to focus on the demonstrably weaker signals transmitted by the state's economic data in 1988. As recently as 1985 and 1986, Arizona still led the 50 states in such measures as job creation, population growth and personal income growth. By summer 1988, the state's ranking in employment growth had slipped into the mid-30s. It is only natural to ask what went wrong.

Growth of the magnitude observed in Arizona during the late 1970s and the mid-1980s, still fresh in our minds, was not normal, typical or sustainable. A wave of growth in high-technology manufacturing, including some major corporate relocations and expansions, was largely responsible for the boom in the late 1970s. The energy crisis, which favored the Sun Belt in general, and demographics that featured a mobile, footloose generation of baby boomers, also played a role.

During the 1980s, the impetus for extraordinary growth in Arizona was provided by the rapid growth of defense contracting and by the aforementioned explosion of speculative real estate development. Again, demographic trends and the economic problems of the Great Lakes region and the oil-producing states were very important factors.

Most analysts agree that Arizona's economy, despite problems that have persisted for the last two years, is fundamentally sound. Even if population growth has been cut in half, to 2 percent per year, it is still more than twice the national average.

However, those who may wish for a quick fix for the Arizona economy (such as the superconducting supercollider) will have to keep hoping. This forecast, which is relatively optimistic about the outlook for the state, depends on a smooth ride for the national economy during the next two years. A good performance by the U.S. economy will produce strong, but not exceptional, growth in Arizona. However, if a national recession is on the horizon, Arizona will not be insulated from its effects.

– **Brian Cary,** *Economist*
*Economic Outlook Center*

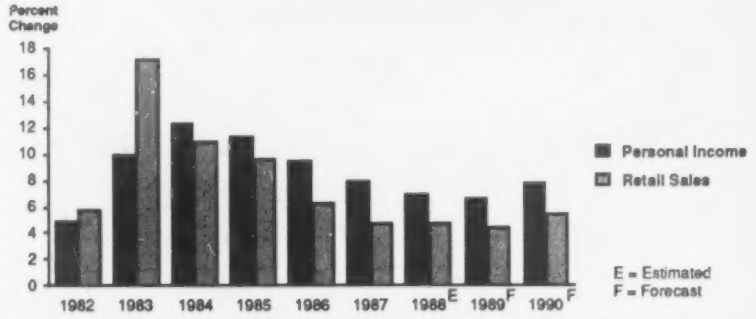
**TABLE 4**
**ARIZONA EMPLOYMENT FORECASTS**
**FOR 1988-1990 (thousands)**

| | 1988 | Percent Change | 1989 | Percent Change | 1990 | Percent Change |
|---|---|---|---|---|---|---|
| Manufacturing | 189.0 | 1.0 | 188.3 | (0.4) | 192.5 | 2.2 |
| Mining | 12.1 | 6.1 | 12.4 | 2.5 | 12.6 | 1.6 |
| Construction | 94.3 | (7.9) | 89.1 | (5.5) | 89.5 | 0.4 |
| TCPU* | 73.6 | 2.2 | 75.2 | 2.2 | 78.0 | 3.7 |
| Trade | 353.1 | 4.0 | 367.3 | 4.0 | 386.1 | 5.1 |
| FIRE** | 93.2 | (1.3) | 95.4 | 2.4 | 99.4 | 4.2 |
| Services | 367.7 | 6.9 | 382.8 | 4.1 | 407.1 | 6.3 |
| Government | 242.9 | 4.3 | 251.5 | 3.5 | 258.8 | 2.9 |
| Total Wage and Salary Employment | 1,425.9 | 3.0 | 1,462.0 | 2.5 | 1,524.0 | 4.2 |
| Total Employment | 1,546.0 | 2.2 | 1,582.0 | 2.3 | 1,650.0 | 4.3 |
| Total Unemployment | 104.0 | 3.0 | 116.0 | 11.5 | 114.0 | (1.7) |
| Labor Force | 1,650.0 | 2.2 | 1,698.0 | 2.9 | 1,764.0 | 3.9 |
| Unemployment Rate | 6.3 | | 6.8 | | 6.5 | |

*Transportation, Communications and Public Utilities
**Finance, Insurance and Real Estate

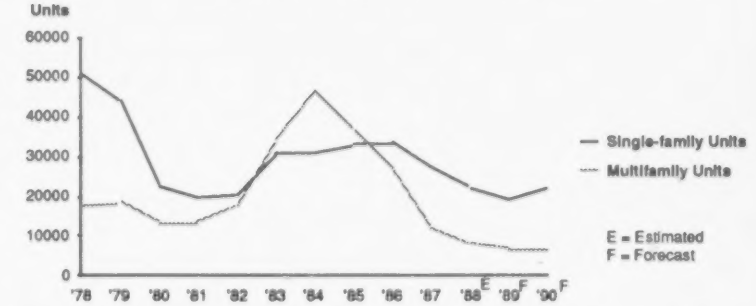
*Source:* Economic Outlook Center, College of Business, Arizona State University.

**FIGURE II**
**ARIZONA PERSONAL INCOME AND RETAIL SALES GROWTH, 1982-1990**




*Source:* Arizona Department of Revenue and Economic Outlook Center, College of Business, Arizona State University.

**FIGURE III**
**ARIZONA RESIDENTIAL CONSTRUCTION**
**New Housing Units Authorized**




*Source:* Arizona Real Estate Center, Center for Business Research, and Economic Outlook Center, College of Business, Arizona State University.

# Arizona Leading Index Slips Again in October

The Arizona Index of Leading Economic Indicators declined to 110.1 in October, a decrease of 0.5 percent from September's 110.6 (1977 = 100). The October dip was the second in the past two months (Figure I).

The greatest negative influence on the index again this month was a decrease in the value of seasonally adjusted residential building permits. An additional strong negative force was a reduction in the money supply, the fourth consecutive decline for this component.

Three components made positive contributions to the index in October. Ordered from largest to smallest effect, they included inventory levels, new orders, and production by Arizona firms.

## ANALYSIS

The Arizona Index of Leading Economic Indicators rose steadily from the end of 1982 until October of 1987, when it peaked at 111.2. During this period, Arizona enjoyed exceptional economic growth, adding some 200,000 jobs.

The index showed particular strength during 1985 and 1986, when it increased by six points. These were years of vigorous performance by the general indicators of the Arizona economy.

The growth of the index slowed significantly beginning in the early part of 1987 and the index finished that year below its January starting point. During 1988, the index recovered slowly to a new peak in August and then slipped back to the current 110.1 reading. This index value is identical to that recorded two years ago, in October of 1986.

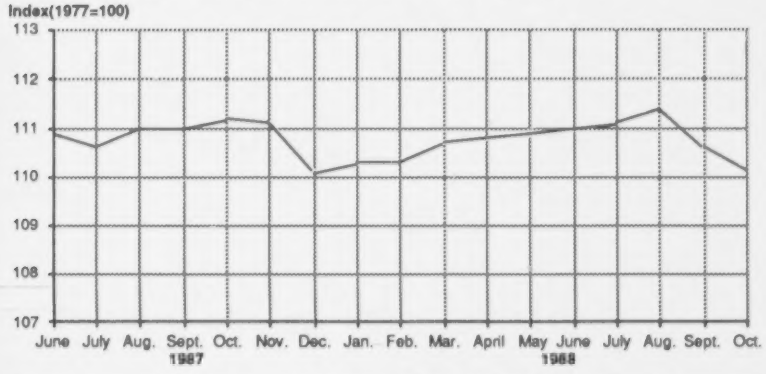
## OUTLOOK

The path of the index during the past two years is consistent with the performance of the Arizona economy during the period. While growth has been present, it has been weaker than recorded during 1985 and 1986. The recent drop in the index confirms the outlook most analysts hold for 1989: an unspectacular year for Arizona.

The behavior of the index during the next two to three months bears watching. Further declines would signal the possibility of a swing from the slow positive growth experienced during the past quarters to no growth or even contraction of the economy in the year ahead.

– **Lee R. McPheters,** *Director Economic Outlook Center*

**FIGURE I**
**ARIZONA INDEX OF LEADING ECONOMIC INDICATORS**




*Source:* Economic Outlook Center, College of Business, Arizona State University; sponsored by Citibank (Arizona).

**TABLE 1**
**NET CONTRIBUTION OF INDIVIDUAL COMPONENTS TO THE ARIZONA INDEX OF LEADING ECONOMIC INDICATORS**

| | Net Contribution* | | | |
|---|---|---|---|---|
| | *July* | *Aug.* | *Sept.* | *Oct.* |
| Delivery Time** | .13 | .02 | –.08 | –.03 |
| Inventory Levels* | .17 | –.06 | –.06 | .14 |
| New Orders* | .08 | –.02 | –.08 | .06 |
| Production* | .01 | –.08 | .01 | .02 |
| Employment* | .05 | .05 | –.03 | –.10 |
| Residential Building Permits | –.23 | .39 | –.24 | –.20 |
| Unemployment Insurance Claims | .00 | .00 | .00 | .00 |
| Average Workweek, Manufacturing | –.05 | .05 | –.02 | –.07 |
| Money Supply | –.05 | –.10 | –.12 | –.14 |
| Change in Sensitive Materials Prices | .02 | .01 | –.06 | –.08 |
| OVERALL INDEX CHANGE (%) | .13 | .27 | –.69 | –.40 |

*The net contribution of each component is calculated by multiplying the monthly percent change in its index by its relative importance.

**Based on indicators from the purchasing management associations of Arizona and southern Arizona.

*Source:* Economic Outlook Center, College of Business, Arizona State University; sponsored by Citibank (Arizona).

The Arizona leading index is based on 10 economic indicators, combined and weighted to project the pace of economic activity several months ahead. Five of the components come from a monthly survey of Arizona purchasing managers conducted by Dr. Harold Fearon. The Arizona Index of Leading Economic Indicators is sponsored by Citibank (Arizona).

# Arizona Construction Slumps in Third Quarter

After showing some improvement during the second quarter 1988, construction activity in Arizona declined during the third quarter. Total new construction was valued at nearly $1.2 billion (18,683 permits), a 14 percent decrease from the $1.4 billion (22,926 permits) recorded for the second quarter. In the first three quarters of 1988, new construction activity totalled $3.6 billion (62,107 permits) in contrast to the permitted value of $4 billion (72,224 permits) in the same period in 1987. Table 1 shows that construction in all of the key sectors is below the level reported both during the prior quarter and a year ago.

While Maricopa County had less construction during the third quarter (down from $1 billion to $923 million), its share of the state's activity increased from 75 to 78 percent. Pima County had a 34 percent decline from the second quarter (from $137 to $90 million) and just 8 percent of the total activity for the state. Fourteen percent of the total recorded activity occurred in the rest of the state, but the value decreased from $202 million to $163 million. The primary areas of non-metropolitan development were the counties of Mohave ($36 million), Yavapai ($33 million), and Pinal ($22 million).

The twelve areas shown in Table 2 again accounted for 85 percent of the total permitted activity in Arizona. Phoenix reported an improvement over the second quarter (from $396 to $416 million) due only to a $100 million permit for the fourth terminal at Sky Harbor. Tucson declined 46 percent from the second quarter (from $57 to $31 million). The only non-metropolitan area on the list, unincorporated Yavapai County, had $16 million in permitted activity, down from $29 million in the second quarter.

## SECTORAL ACTIVITY

### Residential

Although housing affordability remained good during the second quarter (see *Arizona Business*, December 1988), single-family activity in Maricopa County declined to 3,859 permits in the third quarter from the 4,347 permits of the previous quarter. At the same time, the average permit value has increased from $95,195 to $100,600. In contrast to a year ago, only the cities of Avondale (up from 60 to 90 permits) and Phoenix (from 1,088 to 1,170 permits) reported improved levels of activity.

In response to increasing economic concerns, the single-family sector in Pima County plunged 31 percent from the second quarter (from 991 to 682 permits). Much of the decreased activity was in the unincorporated areas (down from 707 to 483 permits), but Tucson also dropped from 185 to 109 permits and Oro Valley remained fairly consistent (98 to 89 permits). Average single-family permit value in Pima County declined from $69,250 in the second quarter to $67,350.

In the non-metropolitan areas of the state, single-family activity fol-

**TABLE 1**
**KEY SECTOR CONSTRUCTION ACTIVITY**
**(Third Quarter 1988, Second Quarter 1988, and Third Quarter 1987)**

| | SINGLE FAMILY | | COMMERCIAL | | | | | | INDUSTRIAL | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | APARTMENTS[a] | | OFFICE BUILDINGS[b] | | RETAIL STORES[c] | | | |
| Maricopa County | Number of Permits | Dollar Value (000) | Number of Units | Dollar Value (000) | Number of Permits | Dollar Value (000) | Number of Permits | Dollar Value (000) | Number of Permits | Dollar Value (000) |
| Third Quarter 1988 | 3,865 | 388,794 | 1,321 | 48,881 | 51 | 58,386 | 200 | 60,189 | 44 | 15,363 |
| Second Quarter 1988 | 4,347 | 413,813 | 2,888 | 138,715 | 61 | 70,289 | 231 | 134,786 | 32 | 14,573 |
| Third Quarter 1987 | 4,472 | 426,644 | 3,224 | 156,413 | 108 | 115,488 | 191 | 78,091 | 59 | 41,281 |
| Pima County | | | | | | | | | | |
| Third Quarter 1988 | 682 | 45,933 | 260 | 6,625 | 16 | 4,185 | 29 | 6,734 | 4 | 225 |
| Second Quarter 1988 | 991 | 68,616 | 397 | 15,094 | 20 | 5,570 | 14 | 1,331 | 10 | 5,738 |
| Third Quarter 1987 | 1,093 | 74,082 | 490 | 10,107 | 11 | 9,308 | 28 | 11,090 | 6 | 728 |
| Rest of Arizona | | | | | | | | | | |
| Third Quarter 1988 | 1,266 | 85,118 | 138 | 3,483 | 19 | 4,752 | 59 | 8,237 | 13 | 4,533 |
| Second Quarter 1988 | 1,428 | 98,200 | 190 | 5,513 | 36 | 3,434 | 81 | 27,855 | 22 | 2,442 |
| Third Quarter 1987 | 1,386 | 86,035 | 187 | 4,726 | 23 | 3,328 | 55 | 9,998 | 16 | 3,479 |
| Arizona Total | | | | | | | | | | |
| Third Quarter 1988 | 5,813 | 519,845 | 1,719 | 58,989 | 86 | 67,323 | 288 | 75,160 | 61 | 20,121 |
| Second Quarter 1988 | 6,766 | 580,629 | 3,475 | 159,322 | 117 | 79,293 | 326 | 163,962 | 64 | 22,753 |
| Third Quarter 1987 | 6,951 | 586,761 | 4,001 | 171,246 | 142 | 128,124 | 274 | 99,179 | 81 | 45,488 |

[a] Five or more housing units
[b] Office, bank, medical and professional buildings
[c] Shopping centers and other mercantile buildings

*Source:* Arizona Real Estate Center and Center for Business Research, College of Business, Arizona State University.

**TABLE 2**
**REPORTING UNITS WITH GREATEST TOTAL VALUE OF BUILDING PERMITS**
**Third Quarter 1988**

| Reporting Unit | Value (in millions) |
|---|---|
| Phoenix | $416 |
| Scottsdale | 145 |
| Mesa | 78 |
| Chandler | 56 |
| Unincorporated Pima County | 53 |
| Unincorporated Maricopa County | 49 |
| Tempe | 47 |
| Peoria | 46 |
| Gilbert | 43 |
| Tucson | 31 |
| Glendale | 22 |
| Unincorporated Yavapai County | 16 |

*Source:* Arizona Real Estate Center and Center for Business Research, College of Business, Arizona State University.

lowed the same pattern, moving from 1,428 permits (average value of $68,768) in the second quarter to 1,266 permits (average value of $67,235) in the third. Leading areas of activity were Lake Havasu City (205 permits), unincorporated Navajo County (78 permits), and Flagstaff (63 permits).

### Commercial

After a strong second quarter (2,888 units), the apartment sector in Maricopa County declined to 1,321 permits, for a year-to-date total of 4,838 authorized units, down from 6,366 units for the same time period in 1987. The primary areas of apartment development were Phoenix (720 units), Gilbert (296 units), and Scottsdale (165 units).

Pima County reported only 260 authorized units, down from 397 units in the second quarter, with 247 of them authorized for the unincorporated area. In the rest of Arizona, 138 units were authorized,112 of them in Apache Junction.

After a record-setting second quarter ($135 million), the retail sector in Maricopa County decreased to $60 million. Phoenix led with $27 million (down from $78 million), followed by Tempe with $14 million ($8 million). However, this sector improved in Pima County, from $1 million in the second quarter to $7 million in the third, with $5.5 million in retail activity recorded in Tucson. In the rest of Arizona, retail development fell from $28 million to $8 million; Cottonwood recorded $2.6 million and Casa Grande, $1.2 million.

While well below the $115 million level reported a year ago, the office building sector in Maricopa County remained strong in the third quarter at $58 million. With 18 permits, Phoenix accounted for $48 million of the county's permitted activity. In Pima County, Tucson had $1.3 million with $2.3 million being recorded in the unincorporated areas. Only unincorporated Yavapai County recorded permitted activity in excess of $1 million.

The hotel/motel sector improved slightly from $8.6 million to $11 million. All of the activity was recorded in Phoenix, where 262 rooms were added.

### Industrial

Industrial development in Maricopa County improved slightly over the second quarter (from $14 to $15 million), but is still well below the $41 million recorded during the third quarter of 1987. Chandler led with 23 permits valued at $7 million, followed by Phoenix (13 permits worth $5 million).

In contrast, industrial activity in Pima County fell from $6 million to under $1 million. With 3 permits valued at $2.1 million, unincorporated Yuma County led the non-metropoli-

**TABLE 3**
**ARIZONA HOUSING UNITS AUTHORIZED**
**Third Quarter 1988**

| | One Family | Mobile Homes | Duplex | 3-4 Family | 5 or More | Total |
|---|---|---|---|---|---|---|
| APACHE COUNTY | 41 | 13 | 0 | 0 | 0 | 54 |
| Percent Change, Previous Year | 128 | -48 | — | — | — | 4 |
| Percent Change, Previous Qtr. | 100 | -52 | — | — | — | 38 |
| COCHISE COUNTY | 48 | 20 | 0 | 0 | 0 | 68 |
| Percent Change, Previous Year | -56 | 43 | — | — | — | -47 |
| Percent Change, Previous Qtr. | -58 | 67 | — | — | — | -46 |
| COCONINO COUNTY | 172 | 102 | 2 | 0 | 0 | 276 |
| Percent Change, Previous Year | 7 | 3 | 0 | — | — | 6 |
| Percent Change, Previous Qtr. | -1 | -6 | -56 | — | — | -39 |
| GILA COUNTY | 59 | 45 | 0 | 0 | 0 | 104 |
| Percent Change, Previous Year | -50 | -21 | — | — | — | -41 |
| Percent Change, Previous Qtr. | -9 | -31 | — | — | — | -19 |
| GRAHAM COUNTY | 14 | 43 | 0 | 0 | 0 | 57 |
| Percent Change, Previous Year | 56 | -80 | — | — | — | -10 |
| Percent Change, Previous Qtr. | -36 | -57 | — | — | — | -34 |
| GREENLEE COUNTY | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Change, Previous Year | — | — | — | — | — | — |
| Percent Change, Previous Qtr. | — | — | — | — | — | — |
| LA PAZ COUNTY | 2 | 80 | 0 | 4 | 0 | 86 |
| Percent Change, Previous Year | -33 | 178 | — | — | — | 157 |
| Percent Change, Previous Qtr. | -80 | 9 | — | — | — | 10 |
| MARICOPA COUNTY | 3,859 | 39 | 4 | 11 | 1,321 | 5,234 |
| Percent Change, Previous Year | -14 | -88 | -95 | -78 | -80 | -36 |
| Percent Change, Previous Qtr. | -11 | -89 | -91 | -88 | -54 | -30 |
| MOHAVE COUNTY | 362 | 203 | 0 | 0 | 12 | 577 |
| Percent Change, Previous Year | 19 | -9 | — | — | -90 | -1 |
| Percent Change, Previous Qtr. | 0 | -18 | — | — | -92 | -15 |
| NAVAJO COUNTY | 80 | 36 | 0 | 0 | 0 | 116 |
| Percent Change, Previous Year | 8 | -7 | — | — | — | 3 |
| Percent Change, Previous Qtr. | 0 | -82 | — | — | — | -9 |
| PIMA COUNTY | 662 | 17 | 12 | 8 | 260 | 977 |
| Percent Change, Previous Year | -39 | -83 | 50 | -14 | -47 | -42 |
| Percent Change, Previous Qtr. | -31 | -19 | 0 | 0 | -35 | -32 |
| PINAL COUNTY | 141 | 86 | 0 | 8 | 113 | 348 |
| Percent Change, Previous Year | 66 | -19 | — | -95 | 882 | 84 |
| Percent Change, Previous Qtr. | 88 | 86 | — | — | — | 144 |
| SANTA CRUZ COUNTY | 69 | 0 | 2 | 4 | 0 | 75 |
| Percent Change, Previous Year | 85 | — | 0 | 0 | 0 | 88 |
| Percent Change, Previous Qtr. | 80 | — | — | -96 | — | 88 |
| YAVAPAI COUNTY | 239 | 156 | 10 | 14 | 0 | 421 |
| Percent Change, Previous Year | -41 | 9 | 25 | -80 | -96 | -58 |
| Percent Change, Previous Qtr. | -35 | -1 | 66 | -53 | -80 | -36 |
| YUMA COUNTY | 80 | 94 | 0 | 0 | 0 | 174 |
| Percent Change, Previous Year | 11 | 0 | — | — | — | 1 |
| Percent Change, Previous Qtr. | -10 | -13 | — | — | — | -17 |
| TOTAL, ARIZONA | 5,855 | 882 | 30 | 46 | 1,719 | 8,541 |
| Percent Change, Previous Year | -16 | -38 | -46 | -40 | -67 | -31 |
| Percent Change, Previous Qtr. | -13 | -16 | -46 | -71 | -61 | -26 |

Note: A dash indicates that a percent change could not be calculated because at least one period had no activity.

*Source:* Center for Business Research, College of Business, Arizona State University

tan areas, followed by Casa Grande with 3 permits worth $1.7 million.

**Other**

This sector was dominated by a single permit for $100 million for the fourth terminal at Sky Harbor. Permits for two public parking garages in Phoenix accounted for another $13 million.

New educational facilities in the state were valued at $28 million; the leading areas were Page with $4.4 million, and Show Low with $3.4 million. New health care facility development remained strong at $24 million. One permit was issued in Peoria for $13 million.

## LOOKING AHEAD

Driven by a rapidly growing economy and population in the early 1980s, Arizona had a building boom of unprecedented proportion. However, construction activity soon exceeded the demands of an expanding, albeit slowing, market. In fact, the development activity was so heightened that even after two years of slowing activity, practically all sectors of the industry are still overbuilt.

As a result of this overbuilding, most sectors have reported high va-

**TABLE 4**
**ARIZONA BUILDING PERMITS**
**Third Quarter 1988**

| | Residential* | | Commercial | | Industrial | | Other | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *Number of Permits* | *Dollar Value (000)* | *Number of Permits* | *Dollar Value (000)* | *Number of Permits* | *Dollar Value (000)* | *Number of Permits* | *Dollar Value (000)* | *Number of Permits* | *Dollar Value (000)* |
| APACHE COUNTY | 82 | 1,915 | 1 | 40 | 0 | 0 | 18 | 3,864 | 111 | 5,819 |
| Percent Change, Previous Year | 19 | -4 | -66 | -61 | — | — | 200 | 1,283 | 25 | 137 |
| Percent Change, Previous Qtr. | 59 | 6 | 0 | -48 | — | — | 350 | 9,267 | 78 | 203 |
| COCHISE COUNTY | 146 | 2,662 | 9 | 466 | 0 | 0 | 141 | 458 | 297 | 3,819 |
| Percent Change, Previous Year | -69 | -69 | -67 | -83 | — | — | -27 | -19 | -49 | -66 |
| Percent Change, Previous Qtr. | -39 | -58 | -69 | -67 | — | — | -20 | -15 | -54 | -66 |
| COCONINO COUNTY | 500 | 17,878 | 36 | 1,382 | 2 | 307 | 160 | 6,369 | 697 | 25,729 |
| Percent Change, Previous Year | -3 | 19 | -17 | -70 | 0 | -62 | -6 | 21 | -5 | 1 |
| Percent Change, Previous Qtr. | -3 | -17 | -61 | -90 | 100 | 1,906 | -10 | 481 | -7 | -12 |
| GILA COUNTY | 348 | 8,716 | 7 | 126 | 0 | 0 | 51 | 2,847 | 384 | 8,587 |
| Percent Change, Previous Year | -6 | -10 | -69 | -76 | — | — | -30 | 369 | -12 | 14 |
| Percent Change, Previous Qtr. | -1 | -4 | -68 | -84 | — | — | -51 | 298 | -14 | 7 |
| GRAHAM COUNTY | 111 | 1,970 | 7 | 166 | 0 | 0 | 22 | 306 | 140 | 2,443 |
| Percent Change, Previous Year | -9 | 30 | -30 | -96 | — | — | 29 | 1,130 | -1 | -90 |
| Percent Change, Previous Qtr. | -67 | -9 | 133 | -6 | — | — | 47 | 58 | -15 | -4 |
| GREENLEE COUNTY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent Change, Previous Year | — | — | — | — | — | — | — | — | — | — |
| Percent Change, Previous Qtr. | — | — | — | — | — | — | — | — | — | — |
| LA PAZ COUNTY | 98 | 1,009 | 10 | 490 | 0 | 0 | 37 | 175 | 135 | 1,668 |
| Percent Change, Previous Year | 139 | 167 | 43 | -68 | — | — | 42 | 265 | 98 | -19 |
| Percent Change, Previous Qtr. | 10 | 2 | 67 | 432 | — | — | 19 | 66 | 19 | 42 |
| MARICOPA COUNTY | 5,469 | 407,276 | 830 | 220,699 | 44 | 18,343 | 4,160 | 278,772 | 10,303 | 925,300 |
| Percent Change, Previous Year | -18 | -9 | -39 | -43 | -26 | -63 | -36 | 32 | -23 | -15 |
| Percent Change, Previous Qtr. | -19 | -7 | -32 | -41 | 38 | 6 | -30 | 32 | -25 | -11 |
| MOHAVE COUNTY | 864 | 35,140 | 37 | 5,462 | 1 | 3 | 949 | 2,864 | 1,251 | 54,229 |
| Percent Change, Previous Year | -5 | 14 | 6 | 61 | -50 | — | 1 | -36 | 4 | 9 |
| Percent Change, Previous Qtr. | -18 | -5 | -18 | -23 | -50 | -94 | -17 | -9 | -17 | -9 |
| NAVAJO COUNTY | 338 | 7,732 | 9 | 382 | 0 | 0 | 69 | 3,862 | 480 | 12,076 |
| Percent Change, Previous Year | 92 | 22 | 0 | -63 | — | — | 126 | 823 | 92 | 98 |
| Percent Change, Previous Qtr. | -6 | 0 | -69 | -86 | — | — | 31 | 1,964 | -4 | 0 |
| PIMA COUNTY | 1,487 | 81,084 | 76 | 18,881 | 4 | 235 | 1,488 | 18,962 | 3,066 | 80,462 |
| Percent Change, Previous Year | -60 | -36 | -4 | -38 | -33 | -69 | -25 | -54 | -32 | -42 |
| Percent Change, Previous Qtr. | -23 | -32 | 12 | -15 | -90 | -98 | 11 | -40 | -9 | -34 |
| PINAL COUNTY | 481 | 13,717 | 54 | 9,402 | 5 | 2,009 | 211 | 1,098 | 751 | 26,187 |
| Percent Change, Previous Year | 74 | 76 | 54 | 96 | 25 | 406 | 62 | -21 | 68 | 89 |
| Percent Change, Previous Qtr. | 71 | 87 | 80 | -6 | -44 | 109 | 27 | -71 | 88 | 18 |
| SANTA CRUZ COUNTY | 72 | 3,900 | 3 | 200 | 0 | 0 | 6 | 910 | 81 | 4,710 |
| Percent Change, Previous Year | 85 | 124 | -40 | -94 | — | — | -45 | 998 | 47 | 97 |
| Percent Change, Previous Qtr. | 85 | 122 | -89 | -98 | — | — | 20 | 10,067 | 84 | 128 |
| YAVAPAI COUNTY | 799 | 20,449 | 34 | 7,992 | 2 | 191 | 174 | 1,984 | 998 | 30,443 |
| Percent Change, Previous Year | -19 | -29 | 10 | 90 | 0 | -84 | -41 | -74 | -23 | -39 |
| Percent Change, Previous Qtr. | -17 | -51 | -17 | -5 | -60 | -71 | -38 | -84 | -32 | -39 |
| YUMA COUNTY | 844 | 7,795 | 19 | 3,129 | 3 | 2,066 | 186 | 3,991 | 432 | 16,981 |
| Percent Change, Previous Year | 6 | 7 | -46 | -27 | 0 | 200 | 7 | 119 | 2 | 30 |
| Percent Change, Previous Qtr. | -13 | -10 | -17 | -45 | 50 | 1,200 | -20 | 34 | -17 | -6 |
| TOTAL, ARIZONA | 10,893 | 674,009 | 909 | 289,486 | 81 | 28,121 | 7,996 | 327,436 | 19,799 | 1,191,896 |
| Percent Change, Previous Year | -12 | -11 | -31 | -40 | -48 | -69 | -32 | 16 | -17 | -19 |
| Percent Change, Previous Qtr. | -19 | -11 | -27 | -40 | -6 | -12 | -21 | 32 | -16 | -14 |

*Includes mobile homes

Note: A dash indicates that a percent change could not be calculated because at least one period had no activity.

*Source:* Center for Business Research, College of Business, Arizona State University

cancy rates during 1988. But in spite of slow construction and real estate markets, the Arizona economy has continued to grow and people have continued to move to the state. This growth, while slower than the last few years, has supported the current levels of activity, especially within Maricopa County.

As in most of 1988, no broad-based trend is discernible that would stimulate a strong improvement in market and construction activity. Most of the current development activity is aimed at specific market niches, a condition evidenced by the fact that much of the quarter's activity was driven by a few large projects such as Camelback Esplanade ($27 million) and Sky Harbor ($100 million). The role of public projects has become increasingly important in sustaining the construction industry. For example, public projects in Phoenix, valued at $127 million, accounted for 31 percent of the $416 million total recorded for the city in the third quarter.

Nothing appears to be occurring that will soon stimulate the construction market, and there is still expectation of adverse economic conditions that would significantly lower activity for the remainder of 1988 and for 1989. Thus, the outlook for 1989 does not call for any improvement over the last two years. Before any improvement can occur, the economy and population must expand at faster rates than experienced during 1988. Such expansion is required, not only to spur construction activity, but —more important—to allow the market to absorb the current supply of space.

The key to renewed growth in construction activity lies largely in the regeneration of positive perceptions of the future among developers. Basically, a developer must feel relatively secure about the acceptance of his proposed project before he can realistically undertake actual construction. There are, of course, many measures on which such a perception of the future can be based. But, unless some combination of these measures leads developers to perceive the future market as being much improved over its present state, another strong level of construction activity will not begin.

Arizona still has the basic strength and diversity in its economy for a very positive outlook for the 1990s, but though the long-term outlook is very good, market and economic activity will not support stronger levels of activity for the next year. 1988 and 1989 should still be good years, but development will continue to be slow and uneven.

**– Jay Q. Butler**

*Dr. Butler is Associate Professor of Real Estate and Director of the Arizona Real Estate Center in the ASU College of Business.*

## Arizona's Construction Industry is One of the Most Cyclical in Nation

Annual growth of Arizona's construction industry has varied more since the early 1960s than in any state except Alaska, Nevada and Wyoming. In each of these low-population states and in Arizona, the construction industry is unusually large and fast-growing on average, despite considerable ups and downs.

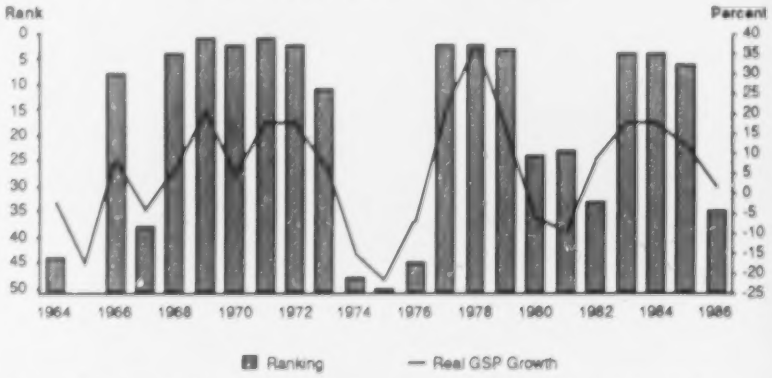
The growth of Arizona's construction gross product and its ranking among the 50 states is shown in Figure I. Arizona's construction industry was among the nation's five fastest growing in 1968-72, 1977-79 and 1983-84, but was among the five worst performing in 1965 and 1974-75. It also failed to keep pace with the national average in 1980-82 and since 1986.

The variations in Arizona usually follow the national economic cycle. However, in the early to mid-1960s and mid- to late 1980s, Arizona's construction industry experienced long down cycles when the national construction industry and the economy in general continued to expand healthily. In contrast, in 1970, Arizona construction continued to expand despite a mild national recession.

The severe cyclicality of the construction industry largely explains the greater than average cyclicality of the entire Arizona economy (see page 11 of the October 1988 issue). In contrast, the cyclicality of manufacturing, the state's other main goods-producing industry, rates about average.

**– Tom R. Rex**
*Research Manager*

**ARIZONA CONSTRUCTION GROSS PRODUCT RANKING AND ANNUAL GROWTH RATE**




*Source:* Center for Business Research, College of Business, Arizona State University from U.S. Department of Commerce, Bureau of Economic Analysis data.

## Coincident Indexes Reveal Continued Weakness in September

The Phoenix area economy plunged 0.9 percent in September, the fourth consecutive monthly decline, putting its coincident index at 146.4 (1982=100). In contrast, the indexes for the Tucson area and for non-urban Arizona each rose 0.2 percent, the second consecutive small gain in each area. Pima County's index advanced to 137.3 while that for rural Arizona edged up to 128.4. The composite statewide measure fell 0.6 percent to 141.7.

The economic slowdown affected Pima County and rural Arizona particularly during the spring and early summer, while the downturn was slower to develop in Maricopa County. However, in the six months between March and September, the cumulative declines in the Phoenix and Tucson areas were nearly equal (see Figure I).

All components of the coincident indexes dropped in all areas during the six months ending in September, but sharp rises in the unemployment rate had the greatest effect. Gains in late 1987 and early 1988 were greater than the losses of the last six months, putting the annual growth rates between 1.5 and 2 percent in each area.

In September, the unemployment rate in each area rose substantially — for the third consecutive month — while the value of commercial building permits declined, especially in Maricopa County. Retail sales advanced in Pima County but dropped in rural Arizona and Maricopa County — to the lowest level since January 1986 in the latter. Employment fell in the Phoenix area but rose elsewhere in the state.

Preliminary employment data for October show further sharp rises in the unemployment rate in the metropolitan counties, though the rate stabilized in rural Arizona. The Phoenix area again suffered employment losses while the rest of the state posted gains.

The modest recovery outside Maricopa County is in line with the small gains measured in the Arizona leading index earlier this year; it should spread to the Phoenix area soon. However, the drop in the September leading index signals that the recovery will be modest and short-lived. Arizona is in for more hard times through at least the middle of 1989.

– Tom R. Rex
*Research Manager*

**FIGURE I**
**CUMULATIVE CHANGE IN COINCIDENT INDEXES**
**April 1988–September 1988**

Note: Total is trend-adjusted.
*Source:* Center for Business Research, College of Business, Arizona State University.

## Purchasing Indicators Show Little Movement in November

The Arizona economy moved sideways in November, as signs of an economic slowing contined to mount. The indicators generally were weak in October, and they continued to soften in November. New orders received showed only a very small increase, and inventory levels fell. Employment of Arizona firms dropped, the first net decline since December 1986. Inflationary pressures continued.

Further price increases, fueled by higher energy prices and shortages of capacity, will continue in the first quarter of the new year. Higher interest rates, designed to prevent any dramatic step-up in the inflation rate, will continue to curtail economic growth. The Arizona economy will slide into 1989, and overall economic growth will be marginal at best through the first quarter.

– Harold Fearon

**TABLE 1**
**NOVEMBER PURCHASING SURVEY**

| | Percent of Purchasing Managers Indicating Each Response (November compared to October) | | |
|---|---|---|---|
| *Key Indicators* | *Higher* | *Same* | *Lower* |
| Prices paid for major commodities | 47 | 51 | 2 |
| Delivery time from vendors | 30 | 62 | 8 |
| Purchased materials inventory level | 24 | 43 | 33 |
| New orders received | 37 | 29 | 34 |
| Production | 37 | 38 | 25 |
| Employment | 15 | 66 | 19 |
| Purchases | 41 | 25 | 34 |

*Source:* Purchasing Management Association of Arizona, Purchasing Management Association of Southern Arizona, and the Northern Arizona Group.

*Dr. Fearon is the National Association of Purchasing Management Professor in the ASU College of Business.*

## ARIZONA ECONOMIC INDICATORS

| | Month or Quarter | Value | Percent Change from Previous Period | Percent Change from Year Ago | Year-to-Date Value | Year-to-Date Percent Change from Year Ago |
|---|---|---|---|---|---|---|
| GROSS STATE PRODUCT (In Billions of Dollars, at Annual Rate) | | | | | | |
| Arizona - Current Dollars | 2nd Qtr. | 69.221 | 2.4 | 6.0 | NA | NA |
| Arizona - 1982 Dollars | 2nd Qtr. | 47.827 | 1.9 | 2.1 | NA | NA |
| COINCIDENT ECONOMIC INDEXES (1982 = 100) | | | | | | |
| Arizona | Sept. | 141.7 | -0.6 | 1.6 | NA | NA |
| Metropolitan Phoenix | Sept. | 146.4 | -0.9 | 1.8 | NA | NA |
| Metropolitan Tucson | Sept. | 137.9 | 0.1 | 2.2 | NA | NA |
| Non-urban Arizona | Sept. | 128.4 | 0.2 | 1.5 | NA | NA |
| CONSUMER PRICE INDEX (1982-84 = 100) | | | | | | |
| Metropolitan Phoenix | 3rd Qtr. | 120.9 | 0.8 | 4.1 | NA | NA |
| INDEX OF LEADING ECONOMIC INDICATORS (1977 = 100) | | | | | | |
| Arizona | Oct. | 110.1 | -0.5 | -1.0 | NA | NA |
| BUILDING PERMITS (Total Dollar Value in Thousands) | | | | | | |
| Maricopa County | Sept. | 231,706 | -49 | -41 | 2,689,385 | -12 |
| Pima County | Sept. | 27,284 | -11 | -55 | 364,125 | -22 |
| Balance of State | Sept. | 54,545 | -16 | -19 | 532,896 | 9 |
| Arizona | Sept. | 313,534 | -43 | -40 | 3,586,406 | -11 |
| TOTAL HOUSING UNITS AUTHORIZED | | | | | | |
| Maricopa County | Sept. | 1,397 | -58 | -56 | 17,544 | -22 |
| Pima County | Sept. | 399 | 17 | -50 | 4,284 | -19 |
| Balance of State | Sept. | 722 | -27 | -23 | 7,386 | -9 |
| Arizona | Sept. | 2,519 | -29 | -49 | 29,214 | -19 |
| HOME SALES | | | | | | |
| Maricopa County - Number | Oct. | 4,980 | 13 | 19 | 43,910 | -15 |
| Maricopa County - Median Price | Oct. | 81,000 | -2 | -1 | 80,500 | 1 |
| HOUSING AFFORDABILITY INDEXES | | | | | | |
| Metropolitan Phoenix - New Homes | 3rd Qtr. | 92 | -2.1 | 2.2 | NA | NA |
| Metropolitan Phoenix - Resale Homes | 3rd Qtr. | 119 | -1.7 | 5.3 | NA | NA |
| MORTGAGE INTEREST RATES (Conventional, 30-year, Fixed-rate) | | | | | | |
| Maricopa County | Nov. | 10.2 | -1.0 | -4.7 | NA | NA |
| POPULATION ESTIMATES (In Thousands) | | | | | | |
| Maricopa County | 3rd Qtr. | 2,024 | 0.5 | 2.0 | NA | NA |
| Arizona | 3rd Qtr. | 3,492 | 0.5 | 1.9 | NA | NA |
| ELECTRICAL POWER SALES (In Millions of Kilowatt Hours) | | | | | | |
| Arizona | Oct. | 3,597 | -8.0 | 19.8 | 37,191 | 13.5 |

NA = Not Applicable

*Source:* Center for Business Research, College of Business, Arizona State University.

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